

## CLAIMS

What is claimed:

- 1           1.     A disk of an optical tester, comprising:  
2                 a transparent substrate that has a first surface and an opposite second  
3 surface;  
4                 a coating on said first surface of said transparent substrate, wherein a  
5 thickness of said coating is substantially inversely proportional to a refractive index of  
6 said coating.
- 1           2.     The disk as recited in Claim 1, wherein said thickness of said coating is  
further substantially proportional to a wavelength of light used to be in said tester.
- 1           3.     The disk as recited in Claim 1, wherein said coating is transparent.
- 1           4.     The disk as recited in Claim 3, wherein said transparent coating has a  
2 hardness that is greater than a hardness of said transparent substrate.
- 1           5.     The disk as recited in Claim 3, wherein said transparent substrate is a  
2 glass material and said transparent coating is a diamond-like-carbon material.

1           6.     The disk as recited in Claim 5, wherein said diamond-like-carbon material  
2 is hydrogenated.

1           7.     The disk as recited in Claim 5, wherein said diamond-like-carbon material  
2 is nitrogenated.

1           8.     A flying height tester for a recording head of a hard disk drive,  
2 comprising:  
3                 a transparent substrate that has a first surface and an opposite  
4 second surface;  
5                 a coating on said first surface of said transparent substrate, said  
6 coating being adjacent to the recording head, wherein a thickness of said coating  
7 is substantially inversely proportional to a refractive index of said coating;  
8                 a light source that directs a beam of light through said transparent  
9 substrate and said coating and onto the recording head, wherein the beam of  
10 light is reflected from the recording head; and,  
11                 a photodetector that detects the reflected light beam.

1           9.     The tester as recited in Claim 10, wherein said thickness of said coating is  
2 further substantially proportional to a wavelength of said light.

1           10.    The tester as recited in Claim 8, wherein said coating is transparent.

1           11.    The tester as recited in Claim 10, wherein said transparent coating has a  
2 hardness that is greater than a hardness of said transparent substrate.

1           12.    The tester as recited in Claim 10, wherein said transparent substrate is a glass  
material and said transparent coating is a diamond-like-carbon material.

1           13.    The tester as recited in Claim 12, wherein said diamond-like-carbon  
material is hydrogenated.

1           14.    The tester as recited in Claim 12, wherein said diamond-like-carbon  
2 material is nitrogenated.

1           15.    A process for providing a disk for an optical tester, comprising:  
2                providing a transparent substrate that has a first surface and an opposite  
3 second surface;  
4                attaching a layer on said first surface of said transparent substrate,  
5 wherein a thickness of said layer is substantially inversely proportional to a refractive  
6 index of said layer.

1           16.    The process as recited in Claim 15, wherein said thickness of said layer is  
2 further substantially proportional to a wavelength of light used in said tester.

1           17.    The process recited in Claim 15, wherein said layer is transparent.

1           18.    The process as recited in Claim 15, wherein said transparent layer has a  
2 hardness that is greater than a hardness of said transparent substrate.

1           19.    The process as recited in Claim 18, wherein said transparent substrate is a  
2 glass material and said transparent layer is a diamond-like-carbon material.

1           20.    The process as recited in Claim 19, wherein said diamond-like-carbon  
2 material is hydrogenated.

1           21.    The process as recited in Claim 20, wherein said diamond-like-carbon  
2 material is nitrogenated.